

Randall A. Bly, MD

CURRENT POSITION:

2016 – Present **Assistant Professor, Pediatric Otolaryngology-Head and Neck Surgery**
Seattle Children's Hospital, University of Washington
Seattle, WA

EDUCATION:

2015 – 2016 **Pediatric Otolaryngology Fellowship, Seattle Children's Hospital**
Seattle, WA

2009 – 2015 **Otolaryngology Residency Program, University of Washington**
Seattle, WA

2005 – 2009 **Stritch School of Medicine, Loyola University**
Maywood, IL
M.D.

2000 – 2004 **Princeton University**
Princeton, NJ
B.S., Mechanical Engineering
Certificate in Engineering Biology
Certificate in Materials Engineering

RESEARCH EXPERIENCE:

2012-2013 **National Institutes of Health Research Fellow**
University of Washington, Seattle, WA, Departments of Electrical Engineering,
BioRobotics Laboratory and Otolaryngology-Head and Neck Surgery
Supervisors: Blake Hannaford, Ph.D., Kris Moe, M.D.
Created computer model to perform advanced pre-surgical planning in skull base
surgery and reconstruction. Obtained additional funding.
Funding: NIH T32 DC00018 Training Grant.

2004 – 2005 **National Science Foundation International Research Fellow**
Princeton University and Alexandria University
Princeton, NJ and Alexandria, Egypt
Supervisors: Winston Soboyejo, Ph.D., Mona Marei, Ph.D.
Modified the surface of titanium to improve interactions with tissue and forged a
new collaboration between Princeton University and Alexandria University,
Egypt.
Awarded a National Science Foundation research grant and returned to
Alexandria, Egypt to complete experimentation October, 2005 and July, 2006.

PUBLICATIONS:

Bly RA, Bhrany AD, Murakami C, Sie K. *Chapter 15: Microtia.* Cranio-facial Surgery for the Facial Plastic Surgeon (Tatum, Morris), Facial Plast Surg Clin N Am. In Press, Aug 2016.

Bly RA, Perkins J, Parikh, SR. Can topical beta blockers reduce the size of superficial infantile hemangiomas of the head and neck? *The Laryngoscope* Accepted Sept 16, 2016.

Ramakrishna R, Kim LJ, **Bly RA**, Moe KM, Ferreira M. Transorbital Neuroendoscopic Surgery for the Treatment of Skull Base Lesions. *Journal of Clinical Neuroscience*. Accepted July 24 2015.

Aghdasi N, **Bly RA**, White LW, Hannaford B, Moe KM, Lendvay TS. Crowd-sourced assessment of surgical skills in cricothyrotomy procedure. *Journal of Surgical Research*. 2015 Jun 15;196(2):302-6.

Bly RA, Morton RP, Kim LJ, Moe KS. Tension Pneumocephalus after Endoscopic Sinus Surgery A Technical Report of Multiportal Endoscopic Skull Base Repair. *Otolaryngology--Head and Neck Surgery*, 151(6), (2014): 1081-1083.

Aghdasi N, Li Y, Berens A, Moe KM, **Bly RA**, Hannaford B. Atlas and feature based 3D pathway visualization enhancement for skull base pre-operative fast planning from head CT. *Proc. International Society for Optics and Photonics*. 9415(19), 2015.

Bly RA, Su D, Lendvay TS, Friedman D, Hannaford B, Ferreira M, Moe KS. Multiportal Robotic Access to the Anterior Cranial Fossa A Surgical and Engineering Feasibility Study. *Otolaryngology--Head and Neck Surgery*, 149.6 (2013): 940-946.

Bly RA, Bly EG. Consult Courtesy. *Journal of Graduate Medical Education*, 5(3), (2013): 533-534.

Bly RA, Ramakrishna R, Ferreira M, Moe KS. Lateral Transorbital Neuroendoscopic Approach to the Lateral Cavernous Sinus. *Journal of Neurological Surgery: Skull Base*. (2014); 75(1), 11–17.

Bly RA., Chang SH., Cudejkova M., Liu JJ, Moe KS. Computer-Guided Orbital Reconstruction to Improve Outcomes. *JAMA Facial Plastic Surgery*, 15(2), (2013): 113-120.

Bly RA, Su D, Hannaford B, Ferreira M, Moe KS. Computer Modeled Multiportal Approaches to the Skull Base. *Journal of Neurological Surgery: Skull Base*. (2012): 73(06), 415-423.

Cao Y, **Bly R**, Moore W, Gao Z, Cuitino AM, Soboyejo W. Investigation of the viscoelasticity of human osteosarcoma cells using a shear assay method. *Journal of Materials Science: Materials in Medicine*. 2007 Jan;18(1):103-9.

RA Bly, Y Cao, WA Moore and WO Soboyejo. Investigation of the effects of alkane phosphonic acid/RGD coatings on cell spreading and the interfacial strength between human osteosarcoma cells and Ti–6Al–4V. *Materials Science and Engineering: C*. 2007 Jan:27(1):83-9.

Bly R, El-Backly R, Chen J, Saad M, AlKhodary M, Fatta M, Moore W, Arnold C, Marei M, Soboyejo W. In-vivo study of adhesion and bone growth around implanted laser groove/RGD-functionalized Ti-6Al-4V pins in rabbit femurs. *Materials Science and Engineering: C*. 2011 31(5): 826-832.

Bly RA, Parikh SR. *Rhinologic and Skull Base Tumors*. Pediatric Otolaryngology - Head and Neck Surgery: A Clinical Reference Guide. Plural Publishing; Jan 2014.

Bly RA, Moe KM. *Transorbital Skull Base Surgery*. Recent Advances in Otolaryngology Head and Neck Surgery. Jaypee Brothers; Apr 2012.

Bly, RA, Parikh SR, *Neck Masses and Adenopathy*. Pediatric Otolaryngology. American Academy of Pediatrics; 2012.

GRANTS AWARDED:

NIH R21, Grant Number: 1R21EB016122-01A1 (\$271,894)

Computer Modeled Multiportal Approaches to the Skull Base

PI: Blake Hannaford, PhD and Kris Moe, MD

Collaborators and Key Personnel: Randall Bly, MD, Howard Chizeck, ScD, Manny Ferriera, MD, Thomas Lendvay, MD

Project Period: 09/01/2013 – 08/31/2015

2013 Coulter Foundation - Translational Research Grant (\$100,000)

Computer Model for Advanced Pre-Operative Surgical Planning

PI: Blake Hannaford, PhD and Kris Moe, MD

Collaborators and Key Personnel: Randall Bly, MD, Howard Chizeck, ScD, Manny Ferriera, MD, Thomas Lendvay, MD

Project Period: 09/01/2013 – 9/30/2014

2013 AAO-HNSF Resident Research Grant (\$9,735)

Computer Modeled Multiportal Approaches to the Skull Base

Project Period: 07/01/2013 – 06/30/2014

UWHA Grant Recipient (\$800)

Computer Modeled Multiportal Approaches to the Skull Base

PI: Randall A. Bly MD

Project Period: 07/01/2013 – 06/30/2014

AWARDS:

Alberta Corkery Fellowship Travel Award. Preoperative Imaging and Surgical Management of Frontonasal Dermoid Cysts: 15-year Experience at a Pediatric Tertiary Care Center. Combined Otolaryngology Spring Meeting, Chicago, IL, May 19-22, 2016.

Resident Leadership Grant Award. American Academy of Otolaryngology—Head and Neck Surgery. Presented September 29-October 2, 2013, Vancouver, BC, Canada.

President Elect Award for outstanding poster presentation. Computer Planning in the Research, Analysis and Design of Skull Base Surgical Approaches. American Academy of Otolaryngology, Oct 2013, Vancouver, BC, Canada.

The most outstanding clinical research presentation, presented by the American Academy of Facial Plastic and Reconstructive Surgery. Combined Otolaryngology Spring Meeting, Orlando, FL: Apr 9-14, 2013.

1st place oral presentation: Slide Tracheoplasty to Repair Congenital Long Segment Tracheal Stenosis. Northwest Academy of Otolaryngology, Fascinating Cases in Otolaryngology. Seattle, WA; Oct 14, 2011.

3rd place oral presentation: Adjuvant Tracheotomy for Grizzly Bear Field Laryngopharyngectomy. Northwest Academy of Otolaryngology, Fascinating Cases in Otolaryngology. Seattle, WA; Oct 14, 2011.

PATENTS:

KS Moe, R Bly, B Hannaford. Instrument Organization Systems and Associated Methods. US Patent 20,150,297,295 (10/11/2015).

R Bly, B Hannaford, KS Moe. Methods And Systems For Selecting Surgical Approaches. US Patent 20,150,297,309 (10/22/2015).

B Hannaford, KS Moe, RA Bly. Soft tissue shield for trans-orbital surgery. US Patent 9,011,326 (4/21/2015).

E Chen, A Kim, C Lam, B Hannaford, RA Bly. Surgical tissue protection sheath. US Patent 8,986,201 (3/24/2015).

KS Moe, R Bly, B Hannaford. Surgical instrument input device organization systems and associated methods. US Patent App. 14/255,779 (4/17/2014).

A Harbison, R Bly, K Moe, J Houlton, B Hannaford. Computer-assisted Maxillary Reconstruction // Draft Provisional Patent Application. Prov 47713.01 (5/26/2016).

ORAL PRESENTATIONS:

Bly RA, Shivaram G, Perkins J. Evidence Based Treatment for Vascular Anomalies; Venous Malformations. Combined Otolaryngology Spring Meeting, May 18-20, 2016, Chicago, IL.

Callahan E, Bly RA, Moe KS, Hannaford B, Sardesai M. Correlation between Expertise and Wrist Motion in Simulated Otolaryngological Surgery. Combined Otolaryngology Spring Meeting, May 18-20, 2016, Chicago, IL.

Purcell P, Bly RA, Manning JP, Manning S. Preoperative imaging and surgical management of frontonasal dermoid cysts: 15-year experience at a pediatric tertiary care center. Combined Otolaryngology Spring Meeting, May 18-20, 2016, Chicago, IL.

Harbison RA, Bly RA, White J, Ching R, Moe KM. Computer modeling of skull base endoscopic instrument motion and surgical pathway analysis. North American Skull Base Society 24th Annual Meeting, San Diego, 2014.

RA Bly, L White, D D'Auria, N Aghdasi, P Bartell, LL Cheng, B Hannaford. Cricothyrotomy Simulator with Computational Skill Assessment for Procedural Skill Training in the Developing World. Otolaryngology--Head and Neck Surgery 149 (2 suppl), P60-P60. 2013. Presented at AAO-HNSF Annual Meeting; September 29 to October 3, 2013; Vancouver, BC, Canada.

RA Bly, D Su, T Lendvay, D Friedman, B Hannaford, M Ferreira, KS Moe. Multiportal Robotic Access to the Anterior Cranial Fossa: An Engineering and Surgical Feasibility Study. Otolaryngology--Head and Neck Surgery 149 (2 suppl), P70-P71. 2013. Presented at AAO-HNSF Annual Meeting; September 29 to October 3, 2013; Vancouver, BC, Canada.

RA Bly, R Morton, L Kim, KS Moe. Tension Pneumocephalus after Endoscopic Sinus Surgery: A Technical Report of Multiportal Endoscopic Skull Base Repair. Otolaryngology--Head and Neck Surgery 149 (2 suppl), P43-P43. 2013. Presented at AAO-HNSF Annual Meeting; September 29 to October 3, 2013; Vancouver, BC, Canada.

RA Bly, SH Chang, M Cudejkova, JJ Liu, KS Moe. Computer-Guided Orbital Reconstruction to Improve Outcomes. Combined Otolaryngology Spring Meeting, Orlando, FL: Apr 9-14, 2013.

RA Bly, D Su, B Hannaford, M Ferreira, KS Moe. "Computer Modeled Multiportal Approaches to the Skull Base." 22nd North American Skull Base Society Annual Meeting, Las Vegas, NV, Feb 15-18, 2012.

RA Bly, D Su, B Hannaford, M Ferreira, KS Moe. "Computer Modeled Multiportal Approaches to the Skull Base." 5th World Congress for Endoscopic Surgery of the Brain, Skull Base, and Spine, Vienna, Austria, Mar 29-Apr 1, 2012.

RA Bly, MK Marei, W Soboyejo. In-vivo study of adhesion and bone growth around implanted laser groove/RGD-functionalized Ti-6Al-4V pins in rabbit femurs. US/Africa Workshop on Frontiers in Materials Research and Education. Abuja, Nigeria, January 2007.